

INFORMATION FOR MAYOR'S IFS COMMITTEE

Projected CIP Need for 2002 Comprehensive Plan Lincoln Water System - Category 5 Projections

Project Cost Categories	1-6 Years FYE 2004-2009			7-12 Years FYE 2010-2015			Total 12 Years FYE 2004-2015		
	Growth	Standards	Total	Growth	Standards	Total	Growth	Standards	Total
Supply & Treatment <i>Note 1</i>	\$13,493	\$0	\$16,228	\$10,500	\$0	\$13,400	\$23,993	\$0	\$29,628
Transmission <i>Note 2</i>	\$17,922	\$0	\$17,922	\$12,295	\$0	\$12,295	\$30,217	\$0	\$30,217
Pumping Station & Reser.	\$4,000	\$0	\$4,000	\$7,400	\$0	\$7,850	\$11,400	\$0	\$11,850
Distribution <i>Note 3</i>	\$34,721	\$0	\$49,121	\$14,852	\$0	\$29,252	\$49,573	\$0	\$78,373
General System Improv. <i>Note 4</i>	\$200	\$0	\$2,080	\$500	\$0	\$1,530	\$700	\$0	\$3,610
Totals	\$70,336	\$0	\$89,351	\$45,547	\$0	\$64,327	\$115,883	\$0	\$153,678
Growth Portion of Total	78.7%			70.8%			75.4%		

* Projections in thousands of Dollars

** All Costs in 2002 Dollars

Note 1 - Total Includes rehab of existing wells, plant rehab, etc

Note 2 - Main from Greenwood to Lincoln

Note 3 - Total includes \$2.4 million per year for rehab of existing mains

Note 4 - Includes Master Plan, Security Upgrade, Prelim Engr; 50% of Master Plan in Growth

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LWS -

Assumptions Regarding the Preparation of the 12 Yr CIP Gap Projections

12/17/02

General

Comp Plan Population Projections 327,306 for 2025
Average Residential Use 93 gallons per capita per day
Average System Use 160 gallons per capita per day
Peaking Factor Return Ratio 12 years
Max Day to Average Day Ratio 2.7
Max Hour to Average Day Ratio 4.4
State Health Standards using AWWA and Ten-States Standards

Supply, Treatment & Transmission

Provide for Max Day Demands 141 Million Gallons per Day (MGD) for 2025
Continued removal of iron and manganese, disinfection
Does not include arsenic removal or UV disinfection
Add Treatment Facilities in minimum of 25 MGD increments
Design for Firm Capacity - Largest component out of service
Assume Antelope Valley Wellfield will not be a viable source long term

Pumping

Provide for Max Day Demands Varies for each pressure district
Design for Firm Capacity - Largest component out of service
Desirable to have two pumping stations in each pressure district

Storage

Provide for Max Hour Demands
Top 1/3 of Floating Storage available for diurnal variations in demands
Middle 1/3 of Floating Storage available for fire protection
Desirable system pressure - 45 to 100 psi, minimum system pressure - 35 psi
Desirable to have two reservoirs in each pressure district

Distribution

Provide for Max Hour Demands plus Fire Demands
Design Standards require minimum of 16" water main grid on section lines, and 12" mains on ½ mile lines
Replacement at a rate of 0.4% of 1,100 total miles of main per year

Costs

New Water Main Pipe Installed \$6.90 per foot per inch diameter,
Water Main Replacement / Rehab \$90 per foot for 6" & 8" in residential
Prices include construction contract, utility relocations, paving removal and replacement, traffic control, engineering services, ROW, contract admin
New Treatment Plant Costs - \$1.00 to \$2.50 per Gallon per Day Capacity
New Reservoir Costs - \$0.75 to \$1.25 per Gallon Capacity

Large Projects Included in LWS 12 year CIP Needs

Description	Cost \$ Millions
Supply & Treatment	
Collector Well on Island	\$ 7.2
25 MG Treatment Plant Expansion	\$16.0
Transmission	
Complete Pipeline to Lincoln - Phase I	\$17.9
Complete Pipeline to Lincoln - Phase II	\$12.3
Pumping Stations & Reserviors	
Add 2 Pumps at PS	\$ 2.7
Complete Pioneers PS	\$ 1.0
Complete Main to Y H	\$ 2.0
Complete Main to Pioneers	\$ 1.3
New Main - Y H - 27 th to 56 th	\$ 2.8
New Main - Y H - 56 th to 84 th	\$ 2.6
43 Miles of 12" & 16" Mains	\$500,000 per mile
16 Miles of 24" & Larger Mains	\$900,000 per mile
General System Improvements & Rehab	
Main Replacement	\$ 2.4 per year
Rehab Existing Wells,	
Reroof Buildings,	
Repaint Reservoirs,	
Upgrade SCADA System	
Master Planning, Etc	